

CLAIMS

We claim:

1. An electrostatic charge storage assembly comprised of:
a capacitor; and
5 a discharge regulator coupled with the capacitor.
2. The electrostatic charge storage assembly of claim 1 further comprising a plurality of load connections.
- 10 3. The electrostatic charge storage assembly of claim 1, wherein the discharge regulator regulates the discharge rate of the capacitor to a load coupled with the load connections so that the discharge rate substantially emulates the discharge rate of a battery.
- 15 4. The electrostatic charge storage assembly of claim 3 wherein the discharge regulator is a zener diode.
5. The electrostatic charge storage assembly of claim 1 wherein the capacitor is a supercapacitor.
- 20 6. The electrostatic charge storage assembly of claim 1, wherein the capacitor is an aerogel supercapacitor.
7. The electrostatic charge storage assembly of claim 1, further comprising:
25 a charging circuit.
8. The electrostatic charge storage assembly of claim 7, wherein the charging circuit is an inductively coupled charging circuit operable to charge the capacitor.
- 30 9. The electrostatic charge storage assembly of claim 8, wherein the inductively coupled charging circuit is comprised of a plurality of secondary coils.

10. The electrostatic charge storage assembly of claim 7 further comprising a charge regulator coupled with the capacitor.
- 5 11. The electrostatic charge storage assembly of claim 10, wherein the charge regulator is a zener diode.
12. An electrostatic charge storage assembly comprised of:
a plurality of capacitors; and
10 a discharge regulator coupled with at least one of the capacitors.
13. The electrostatic charge storage device of claim 12 where the discharge regulator controls the plurality of capacitors so that the discharge rate of the plurality of capacitors substantially emulates the discharge rate of a battery.
- 15 14. The electrical discharge storage device of claim 13 where the discharge regulator is a zener diode.
15. The electrical charge storage assembly of claim 13 wherein the capacitors are electrically coupled in a series configuration.
- 20 16. The electrical charge storage assembly of claim 13 wherein the capacitors are electrically coupled in a parallel configuration.
- 25 17. The electrical charge storage assembly of claim 13 wherein the capacitors are electrically coupled in a combination series and parallel configuration.
18. A self-contained rechargeable electrostatic charge storage assembly comprising:
a charge storage device comprising one or more capacitors;
30 a charging circuit;
a charge control coupled to the charging circuit and the charge storage

device;

a discharge control coupled with the charge storage device;

a first contact coupled with the charging circuit;

a second contact coupled with the discharge control circuit; and

5 a housing substantially containing the first contact, the second contact, the discharge control, the charge control, the charging circuit, and the charge storage device, said housing further having a plurality of apertures operable to expose the first contact and the second contact to therethrough.

10 19. The self-contained rechargeable charge storage device of claim 18 wherein the charging circuit is an inductively coupled charging circuit.

20. The self-contained rechargeable charge storage device of claim 19 wherein the inductively coupled charging circuit is comprised of a plurality of secondary coils.

15 21. A method for providing power to an electronic device, the method comprising:
charging an electrostatic charge storage device;
controlling the discharge of the electrostatic charge storage device to
substantially emulate the discharge of a battery.

20 22. The method of claim 21, wherein the charging is inductive charging.